

30 53
3/046/61/023/011/020/001
B117/B102

Synthesis of multi-component ...

maximum at $x = 0.025$ ($a = (2.2-2.3) \cdot 10^4$ dyne/gauss \cdot cm 2 , no. 3), and K ($K = 0.3-0.32$) within the range of variation $0.025 \leq (x = x_{opt}) \leq 0.035$ (x_{opt} depends on the annealing temperature). The increase of K and a , obtained by the introduction of excessive Fe^{2+} ions is accompanied by an increase of electromagnetic and mechanical losses. The former can be considerably reduced by synthesis of multi-component ferrites with $CuFe_2O_4$, when a and K remain unchanged or are increased but little. Thus the system $(Ni_{0.85}Cu_{0.15})_{1-x}Co_xFe_2O_4$ was obtained by substitution of Cu^{2+} ions for part of the Ni ions in system A. A group of compositions, $Ni_{0.98-x}Co_{0.02}Cu_xFe_2O_4 \cdot (Fe_2O_3)_{0.025}$, was synthesized on the basis of no. 3. In this case, the composition no. 4 is very interesting with $x = 0.075$ ($a = 2.5 \cdot 10^4$, $K = 0.38$). A further improvement of the chemical composition of Ni-Cu-Co-ferrites was effected by the system $(Ni_{0.925}Cu_{0.075})_{1-x}Co_xFe_2O_4(CoFe_2O_4)_x$. In this system, the ferrite with $x = 0.01$ (no. 5) possessed the maximum values of a and K ($a_{max} \approx 2.9 \cdot 10^4$).

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Synthesis of multi-component ...

30083
S/048/61/025/011/029/031
B117/B102

$K_{\max} \approx 0.4$). Contrary to simple ferrite systems, different annealing temperatures corresponding to the maximum values of α and K are characteristic of a number of Ni-Zn-Cu-Co and Ni-Cu-Co ferrites. It is, therefore, possible to modify the properties of ferrites by changing this temperature. The optimum values of the annealing temperature are lowered on transition from pure to industrial raw materials. This is due to impurities contained which act as mineralizers. It was possible to produce new ferrites with higher values of K , α , and Λ than were formerly known. There are 4 figures and 8 references: 3 Soviet and 5 non-Soviet. The four references to English-language publications read as follows:
Ref. 1: Van der Burgt C. M., Philips Res. Repts, 8, 91 (1953); Ditto, Philips Res. Repts, 12, 97 (1957); Ditto, Philips Techn. Rev., 18, no. 10. 285 (1956/57); Weil L., Compt. Rend., 234, 1351 (1952).

Card 4/4

STRELETS, F.L.; SYRKIN, L.N.; TRACHENKO, M.G.

Synthesis of multicomponent ferrates with high values of dynamic magnetostriction parameters. Izv. AN SSSR. Ser. fiz. 25 no.11: 1426-1429 N '61. (MIRA 14:11)

(Ferrates--Magnetic properties)

TKACHENKO, M.K., inzh.; TESLENKO, G., inzh.

Mechanical gates in steel-smelting shops. Bezop.truda v
prom. 4 no.7:32 J1 '60. (MIRA 13:8)
(Dnepropetrovsk--Steelworks--Equipment and supplies)

TKACHENKO, M.K.

Lymphangioma of the root of the tongue. Stomatologiya 42 no.4:
88 JI-Ag'63 (MIRA'17:4)

1. Iz kliniki bolezney ukha, gorla i nosa (zav. - prof. I.M.
Sobol')Stavropol'skogo meditsinskogo instituta.

TKACHENKO, M.K., inzh.

Results of organizational work. Bezop.truda v prom.
4 no.8:29-30 Ag '60. (MIRA 13:8)

1. Dnepropetrovskiy zavod im.K.Libknekhta.
(D: propetrovsk--Steelworks--Safety measures)

ALC NR: AP7007074

SOURCE CODE: UR/0021/66/000/008/1000/1003

AUTHOR: Karpenko, G. V. (Corresponding member AN UkrSSR); Tkachenko, M. M.

ORG: Physics-Mechanics Institute, AN UkrSSR (Fizyko-mekhanichnyy instytut AN UkrSSR)

TITLE: Possibility of applying the law of similtude with respect to the scale effect in physico-chemical mechanics

SOURCE: AN UkrSSR. Dopovidi, no. 8, 1966, 1000-1003

TOPIC TAGS: material fracture, brass, mercury, mechanical stress

SUB CODE: 20

ABSTRACT: It was established that by applying the theory of similtude it is possible to formulate equations for the purpose of calculation which enable one to simulate, under laboratory conditions, processes of fracture of samples of different diameters due to the effect of mechanical stress and an action exerted by a working medium. Geometrically similar brass samples of various diameters were subjected to an investigation in which mercury acted on the samples during mechanical testing. A criterion equation derived on the basis of dimension analysis made it possible to calculate the length of the time of action and the concentration of the medium at which equal mechanical characteristics were ob-

Card 1/2

ACC NR: AP7007074

tained for samples of different diameters. The calculated data were confirmed by experimental results. Orig. art. has: 1 figure and 2 formulas. JPRS: 39,658

Card 2/2

Hand
TKACHENKO, M. S.: Master Med Sci (diss) -- "Morphological changes in the skin and certain internal organs of poikilothermic organisms under the influence of higher temperatures (Experimental investigation)". Khar'kov, 1958. 14 pp (Khar'kov Med Inst), 200 copies (KL, No 2, 1959, 126)

LANDS FOR PLANTING

USSR, Cultivated Plants. - Fruits. Berries

M.

Abs Jour : Ref Zhur - Biol., No 10, 1958, 44317

Author : Tkachenko, M.V.

Inst : -

Title : Experiment in Building Nut Plantings.

Orig Pub : Lesn. Khoz., 1957, No 6, 77-78.

Abstract : About 100 hectares were planted with walnut by the means of sowing onto a permanent place in the Rostov Forest farm. Cherry is used for filling in the rows and current, hazelnut and smoke trees were planted in the spaces between the rows. Pre-winter hilling of the seedlings with soil in the first year after their seeding is carried out for their protection from freezing. The fruit bearing starts in the 8-10 year. -- A.Ch. Kelli

Card 1/1

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"APPROVED FOR RELEASE: 07/16/2001

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APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755920007-5"

PHASE I BOOK EXPLOITATION

819

Timofeyev, Valentin Leont'yevich and Tkachenko, Mikhail Kondrat'yevich

Proizvodstvo martenovskoy stali; uchebnik dlya shkol i kursov masterov (The Production of Open-hearth Steel; a Textbook for Schools and Courses for Foremen) Khar'kov, Metallurgizdat, 1957. 13,000 copies printed.

Resp. Ed.: Zaykov, S.T.; Ed. of Publishing House: Liberman, S.S.; Tech. Ed.: Andreyev, S.P.

PURPOSE: The book is a textbook for schools and for a special two and one half year training course for foremen employed in foundries using the open-hearth process in the production of steel. It may also be of use to engineering and technical personnel, and steel workers of open-hearth plants.

COVERAGE: In a systematic way the authors develop the underlying principles of the theory and practice of the basic and acid open-hearth processes of producing steel. They also discuss methods of pouring steel, the properties of castings, the construction and maintenance of open-hearth furnaces, furnace heating systems and their automatic control, general control of the steel-making process, and cost of production and ways of reducing it. There are 28 references, 25 of which are Soviet, 2 German and 1 English.

Card 1/6

The Production of Open-hearth Steel

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The Production of Open-hearth Steel

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GO/fal
12/8/58

S/148/62/000/011/003/013
E079/E151

AUTHORS: Batalin, G.I., and Tkachenko, M.S.

TITLE: On the problem of nitriding of manganese

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya, no.11, 1962, 76-79.

TEXT: The effect of gas velocity, particle size, and temperature on the nitriding of manganese in a stream of ammonia was investigated. It was found that the velocity of the ammonia stream had no influence on the nitriding process. The influence of the particle size could be described by

$$Y = 10.4 - 0.59 n,$$

where Y = increase in weight (nitrogen content) and n = particle size, mm. The velocity of the process was measured at 650 and 830 °C, and was found to increase twofold on increasing the temperature from 650 to 830 °C. Metallographic investigation of nitrided specimens showed good agreement with the phase diagram of the system Mn-N₂.

Card 1/2

On the problem of nitriding of ...

S/148/62/000/011/003/013
E079/E151

There are 5 figures.

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet
(Kiev State University)

SUBMITTED: March 14, 1961

✓

Card 2/2

BATALIN, G.I.; TKACHENKO, M.S.

Nitriding of manganese. Izv.vys.ucheb.zav.; chern.met. 5 no.11:
76-79 '62. (MIRA 15:12)

1. Kiyevskiy gosudarstvennyy universitet.
(Manganese) (Case hardening)

USSR / Forestry. Forest Crops.

K

Abs Jour : Ref Zhur - Biologiya, No 22, 1958, No. 100193

Author : Trachenko, M. V.

Inst : Not given

Title : A Green Belt Around Rostov-on-Don

Orig Pub : Lesn. kh-vo, 1958, No 5, 29-32

Abstract : No abstract given

Card 1/1

TKACHENKO, M.Ye.; BUCHATSKIY, M.A.; MIKHAYLOVA, N., redaktor; KHIGIROVICH, I.,
tekhnicheskiy redaktor

[The cultivation of foxtail millet and its use for farming purposes]
Kul'tura chumizy i ispol'zovanie ee dlia khoziaistvennykh tsel'ei.
Alma-Ata, Kazakhskoe gos. izd-vo, 1950. 14 p. (MLRA 10:1)
(Millet)

TKACHENKO, M. Ye., Ed.

Lesa Urala (Forests of the Ural) Sverdlovsk, Izd-vo Ural'skogo Filiala Akademii Nauk SSSR, 1948.

230 P. Illus., Maps, Tables.

At Head of Title: N. N. Glushkov, V. I. Vengerov, (i dr) Akademiya Nauk SSSR, Ural'skiy Filial.

SO: 7N/5
729.4
.T6

TKACHENKO M. Ye

TKACHENKO M. Ye "The rationalization of forestry of the Urals and other areas of the USSR in forests of the third group" sbornik naych. trudov (Ural'dkiy Lesotekhnint), Moscow- Leningrad 1948 -p. 5-11

30: U- 3261 10 April 53, (Lepis 'Zhurnal 'nykh Statey No 11 1949)

291.65

Stalinskiy. Plan preobrazovaniya prirody stelyey. (X. Postenovlyeniya sovyeta. Ministov SSSR I tsak vkh(B) "O planye polyezashchitnykh lyesonasachdyeny. . .") Trudy lyasotyekhn, Akad. Im. Kirova, No. 66, 1949 S. 7-39

2. Myekhanizatsiya I olyektrifika tsiya. Mts.

SO: LETOPIS No. 34

TRACED, . . .

Agriculture

Material on steppe forest propagation, Moskva, Goslesbumizdat, 1951.

Monthly List of Russian Accessions, Library of Congress, December 1952. UNCLASSIFIED

TKACHENKO, M. YE.

Tkachenko, M. Ye.

"General Forestry" (text-
book, 2d edition)

Forestry Academy imeni S. M.
Kirov

TKACHENKO, N.

Electromagnetic flowmeter. Koks i khim. no.8:54 '62. (MIRA 17:2)

1. Gorlovskiy koksokhimicheskiy zavod.

TKACHENKO, N.

85-58-5-24/38

AUTHOR: Tkachenko, N., Master of Sports (Kiyev)

TITLE: Sportsmen's Suggestions (Sportsmeny predlagayut)

PERIODICAL: Kryl'ya rodiny, 1958, Nr 5, p 19 (USSR)

ABSTRACT: The author states that the improvements in jump techniques in recent years make necessary a remote-control device for opening the parachute pack without sacrificing form in order to pull the rip cord ring, and an automatic time register for recording the duration of the free fall delayed drops. He describes a new automatic device developed by the Tsentral'nyy aeroklub Ukrainy (Ukrainian Central Aeroclub) and consisting of a housing, a timer, a system of levers, and 2 cables, which performs both functions. The designers used the housing and some parts of the PAS-1. The simplicity of the new device any aeroclub to produce it. Adoption of the device for training practice and industrial production is urged. There is one diagram.

ASSOCIATION: Tsentral'nyy aeroklub Ukrainy (Ukrainian Central Aeroclub)

AVAILABLE: Library of Congress

Card 1/1 1. Aviation - USSR 2. Parachute jumping - Techniques

KUSHNIR, M., inzhener; TKACHENKO, N., inzhener.

Group arrangement of grain dryers of the All-Union Scientific
Research Institute of Agricultural Machine Building at grain
procurement stations of Akmolinsk Province. Muk.-elev.prom. 22
no.1:9-11 Ja '56. (MLRA 9:5)
(Akmolinsk Province--Grain--Drying)

VOLYNSKIY, V.I.; TRACHENKO, N.A.

Ways of improving the balanced erection method of concreting
during the building of large-span bridges. Avt. ocr. 27
no.4:7-8 Ap '64. (MIRA 17:9)

VOROB'YEV, D.D.; DARIYENKO, V.I.; PITYASOV, F.L.; TKACHENKO, N.A.

Experience in cleaning unclassified coal in a jigging machine of new design. Koks i khim, no.1:14-17 '60. (MIRA 13:6)

1. Gorlovskiy koksokhimicheskiy zavod.
(Coal preparation)

DAVIDKOVICH, A.S., inzh.; TKACHENKO, N.A., inzh.; GEYZENBLAZEN, B.Ye.,
inzh.; GONCHAROV, Yu.G.; AFANAS'YEV, V.D., inzh.; RUDOV, V.S.,
inzh.; KONOGRAY, B.Ya., inzh.

Investigating the electroacoustic method of controlling the loading
of ball mills. Gor. zhur. no.5:50-51 My '65. (MIRA 18:5)

1. Trest po avtomatizatsii metallurgicheskikh predpriyatiy "Metal-
lurgavtomatika", Dnepropetrovsk (for Davidkovich, Tkachenko Geizen-
blazen, Goncharov). 2. Nauchno-issledovatel'skiy gornorudnyy institut
(for Afanas'yev, Rudov, Konogray).

TKACHENKO, N.A.; SHKUROVSKIY, I.G.

Continuous processing of tar for hard pitch. Koka i khim. no.8:44-
47 '56. (MIRA 10:1)

1. Gorlovskiy koksokhimicheskiy zavod.
(Pitch) (Coal tar)

TRACHENKO, N.A.; VALYNSKIY, V.I.; ABRAMKIN, I., red.

[Design and construction of a bridge built by the
cantilever concrete placing method] Proektirovanie i
stroitel'stvo mosta, sooruzhaemogo metodom navesnogo
betonirovaniia. Minsk, Belorusskoe respubl. pravlenie
NIO gor. khoz. i avtomobil'nogo transp., 1964. 155 p.
(MIRA 18:4)

TKACHENKO, N.A.; KHVOSTIKOV, V.V.

Bridges of reinforced concrete slabs. Avt.dor. 26 no.9:26-27
S '63. (MIRA 16:10)

PHASE I BOOK EXPLOITATION

PHASE I BOOK EXPLOITATION SOV/5510

Drozd, Yakov Ivanovich, Nikolay Alekseyevich Tkachenko, Il'ya Markovich Gel'man,
Vladimir Iosifovich Volynskiy

Opyt proyektirovaniya i stroitel'stva zhelezobetonnykh predvaritel'no
napryazhennykh mostov v Belorussii (Experience in the Design and Construction
of Prestressed Reinforced Concrete Bridges in Belorussia) Minsk, Redizdat
otdel BPI im. I. V. Stalina, 1960. 281 p. Errata slip inserted. 2,500
copies printed.

Sponsoring Agency: Ministerstvo vysshego, srednego spetsial'nogo i profes-
sional'nogo obrazovaniya BSSR. Belorusskiy politekhnicheskii institut
imeni I. V. Stalina.

Ed. (Title page): Ya. I. Drozd, Honored Scientist and Technologist BSSR;
Ed. of Publishing House: N.V. Kapranova; Tech. Ed.: P.T. Kuz'menok.

PURPOSE: This book is intended for designing engineers and manufacturers of
prestressed bridge components.

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Experience in the Design and Construction (Cont.)

SOV/5510

COVERAGE: The book provides a generalized discussion of experience gained in the production of prestressed bridge components and the assembly of prestressed bridges in Belorussia. Special attention is given to the production, preparation, and mounting of prestressed components. Chapters VI and VII were written by Ya. I. Drozd; Ch. III and the Appendixes by N.A. Tkachenko; Ch. II by I.M. Gel'fman; Chs. IV and V by V.I. Volynskiy. The authors thank Ya. D. Livshits, Doctor of Technical Sciences, Engineer I.I. Grigorovich, Head of the Gushosdor (Main Administration of Highways) of the Council of Ministers of the BSSR, and A.F. Krayukhin, Engineer. There are 37 references, all Soviet (including 2 translations).

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Card 2/8

TKACHENKO, N.A.

S/068/60/000/012/001/005
K01/1335

AUTHORS: Litvinenko, M.S., Tyutunikhov, Yu.B.,
Verkhinina, S.V., Darylenko, V.I., Vorob'yev, D.D. and
Tkachenko, N.A.

TITLE: An Increase in the Yield of Coke-Oven By-Products by
the Pyrolysis of Heavy Petroleum Oils in Coke Ovens

PERIODICAL: Koks i khimiya, 1960, No.12, pp.8-10

TEXT: The results of laboratory and plant experiments on the
possible increase in the yield of gas and benzole on coke blends
with additions of fuel oil are described. Laboratory experiments
(no details given) gave the following indications:
1) Additions of fuel oil to coke increase the bulk density of the
charge. 2) The yield of gas, raw benzole and tar is higher than
from ordinary coal blends within wide limits, depending on the
amount of fuel oil added and coking conditions. 3) Coal oil is
transferred to gas and benzole when oil additions to coal are small
and the free space in the coke oven is high. Under such conditions,
up to 63.35% of oil is transferred into gas and up to 10.7% into
Card 1/3

raw benzole, but the amount of tar formed decreased.
4) The composition of gas obtained on coking of charges containing
fuel oil is characterized by somewhat increased content of hydrogen
and unsaturated compounds. The composition of gas depends mainly
on the degree of pyrolysis of the fuel oil employed. 5) In all
cases, the amount of gas is higher than from ordinary coal blends.
6) The quality of raw benzole
of pyrogenic water was observed. 7) The quality of raw benzole
and tar on coking blends containing fuel oil also depends on the
conditions of pyrolysis. If, in addition to an increased yield of
benzole, the content of benzole fraction in the raw benzole was at
a maximum (68.56%) and washing losses were only slightly higher
than with benzole obtained from normal coal blends (from 5.5 to 7.5%).
At low temperatures of the free space and other conditions being
equal, the content of benzole fraction in raw benzole decreased
from 68.56 to 63.60% and washing losses increased to 10.79%.
A further decrease in the degree of pyrolysis by decreasing the
Card 2/3

residence time of gases in the free space leads to a further
increase in washing losses up to 13.35% and a decrease in the
content of benzole fraction in the raw benzole to 63.1%.
7) The tar produced from oiled coal has a somewhat lower specific
gravity, increased content of phenols, carbon and an insignificant
decrease in the content of pitch. 8) The mechanical strength
of coke remained unchanged. The MIP-46 (PVR-46) type
four batteries of ovens space of ovens was comparatively low and
varied within the following limits: No.1 battery 4, 650 to 700°C;
No.2 725 to 770°C, No.3 612 to 707°C and 13 hours 36 minutes
and on No.3 and 15 hours 25 minutes. 9) Temperatures in the control
flues: No.1 and 2 pusher side 1325°C, coke side 1375°C;
No.3 and 4 pusher side 1335°C, coke side 1380°C. Addition of
2% fuel oil (types 80 and 20) was effected by spraying the blend
on the conveyor belt leading to the service bunkers. Mixing of
Card 3/3

5/068/60/000/012/001/005
Z071/E435

An Increase in the Yield of Coke-Oven By-Products by the Pyrolysis of Heavy Petroleum Oils in Coke Ovens

the blend was done by 6 disc ploughs placed under the conveyor. The composition and properties of the coal blend prepared during the experimental periods are given in Table 1 (moisture 10%, volatile matter 26 to 27%, -3 mm fraction 89 to 90%). The increase in the bulk density of the charge (from 740 to 751 kg/m³) required higher flue temperatures, these were increased (by 10°C) insufficiently due to the poor state of the ovens. Mechanical properties of coke (Table 2) remained practically the same. There was some increase in the proportion of large fractions (above 60 mm) and in the volatile content of coke. The content of benzole in the gas increased from 40.3 g/m³ to 46.1 g/m³ and with a uniform addition of oil of 2 to 2.5% to 48 to 50 g/m³. The composition of washed gas remained practically the same (Table 3) but its daily output increased from 1232 to 1286 thousand m³ (4.4%). Specific gravity of tar decreased by 0.017 and the yield of its light fraction increased by 0.4%. The composition of tar from primary condensers somewhat changed: its specific gravity

Card 4/5

increased by 0.015 and the yield of light fractions decreased by 0.9%. Washing losses of benzole increased by 0.4%, its specific gravity decreased from 0.875 to 0.872; the content of the benzole fraction decreased from 68.33 to 67.35%; the content of toluol increased from 15.06 to 15.35%. 9.22% of the fuel oil added to coal was transferred into raw benzole, 37.2% into gas and 16.0% into tar. It is concluded that in order to increase the output of gas, benzole and tar additions of fuel oil to coal are recommended. The proportion of fuel oil which can be added should be established for each individual works. The following participated in the work: V. Ya. Tsypurik, A. V. Shupat, I. A. Pilyayev, E. A. Vashchenko, S. D. Broshkiy, N. I. Zil'yashov, G. S. Kuznetsov, V. D. Kuznetsov, S. K. Kaganov, I. I. Kiknadze, M. P. Kabanov, and A. Ya. Val'abiy. There are 3 tables and 1 Soviet reference.

ASSOCIATIONS: UKHEN Litvinenko, N. S. Tyutyunnikov, Yu. B. Vershina, S. V. Gorlovskiy Kokshetauskiy zavod (Kokshetauskiy Zavod, Gorlovskiy Zavod)

Card 5/5

TKACHENKO, N.A.; VOLYNSKIY, V.I.

Placing concrete for the span of a large bridge from suspended
units. Avt.dor. 26 no.4:12-14 Ap '63. (MIRA 16:4)
(Bridge construction) (Bridges, Concrete) ,

LITVINENKO, M.S.; TYUTYUNNIKOV, Yu.B.; VERSHININA, S.V.; DARIYENKO, V.I.;
VOROB'YEV, D.D.; TKACHENKO, N.A.

Increase of the yield of coke-chemical products by the pyrolysis
of heavy petroleum oils in coke ovens. Koks i khim. no.12:8-10
'60. (MIRA 13:12)

1. Khar'kovskiy nauchno-issledovatel'skiy uglekhimicheskiy institut
(for Vershinina). 2. Gorlovskiy kokhokhimicheskiy zavod (for Tkachenko).
(Coke industry---By-products)

TKACHENKO, N.A., inzh.

A prestressed concrete bridge has been tested. Avt. dor. 28
no.1:14-15, 19 Ja '65. (MIRA 18:3)

TRACHENKO, N.I.; TSALIKOVA, A.V.; IVANOVA, Z.T.

Waste water of hydrolysis plants processing cottonseed hulls.
Gidroliz. i lesokhiz.prom. 19 no.5:11-13 '57. (PER. 1957)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut gidroliznoy i
sul'fitno-spirovoy promyshlennosti.
(Water--Waste) (Hydrolysis)

TKACHENKO, N.I., elektromekhanik

Method for checking the output limitation of I GIO devices.
Avtom. telem. i sviaz' 8 no.2:34-35 F '64.

(MIRA 17:6)

1. Lozovskaya distantsiya signalizatsii i svyazi Yuzhnoy
dorogi.

DRUBLYANETS, E.E., kand. biol. nauk; TKACHENKO, N.I., kand. biol. nauk; STAROSTINA, Z.I., nauchn. red.; SHENDAREVA, L.V., tekhn. red.

[Improvement of the biological system of purification of the waste waters of hydrolysis plants] Sovershenstvovanie rezhima biologicheskoi ochistki stochnykh vod gidroliznykh zavodov. Moskva, TSentr. in-t tekhn. informatsii i ekon. issledovaniy po lesnoi, bumazhnoi i derevoobrabatyvaiushchei promyshl., 1963. 35 p. (MIRA 17:4)

TKACHENKO, N.I. (Leningrad) ; YUDINA, T.A. (Leningrad)

Survival rate of *Escherichia coli* in the waste waters of hydrolysis
plants. *Vod. i san. tekhn.* no. 4:31-32 Ap '61. (MIRA 14:4)
(*Escherichia coli*) (Sewage—Microbiology)

TKACHENKO, N. I., MINAYEV, V. M., BAROVA, N. I., STARODUBTSOVA, G. I., TREPOVSKAYA, A. V., SHAMARINA, A. G., KOROVIK, A. G.

"A study of the natural foci of vernal encephalitis in the western Urals." Page 79

Desyatoye soveshchaniye parazitologicheskimi problemami prirodnookhazhnykh boleznyam. 22-29 Oktabrya 1959 g. (Tenth Conference on Parasitological Problems and Diseases with Natural Foci 22-29 October 1959), Moscow-Leningrad, 1959, Academy of Medical Sciences USSR and Academy of Sciences USSR, No. 1 254pp.

Perm' Inst. Of Vaccines and Sera and the Oblast Sanitary-Epidemiological Station

DRUBLYANETS, E.E.; TKACHENKO, N.I.; IVANOVA, Z.T.

Features of the fermentation of wood hydrolyzates by Schizosaccharomyces
Pombe. Trudy Inst. mikrobiol. no. 6:203-211 '59. (MIRA 13:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidroliznoy i
sul'fitno-spirovoy promyshlennosti.
(SCHIZOSACCHAROMYCES) (WOOD)

TKACHENKO, N.I.; DRUBLYANETS, E.E.

Sphaerotilus dichotomus, organism causing the "swellign" of activated sludge in aeration tanks. Mikrobiologiya 28 no.5:763-767 S-O '59.

(MIRA 13:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidroliznoy i sul'-fito-spirtovoy promyshlennosti , Leningrad.

(SPHAEROTILUS)

(SEWAGE)

STUKANOV, Leonid Aleksandrovich; TKACHENKO, N.I., redaktor; RODIONOVA, Z.A.
redaktor; DZHATIYEV, S.G., tekhnicheskly redaktor

[Teaching mechanical drawing in the secondary school; experience of
a teacher] Opyt prepodavaniia chercheniia v srednei shkole; iz opyta
raboty uchitelia. Pod red. N.I. Tkachenko. Moskva, Gos. uchebno-pe-
dagog. izd-vo M-vn prosv. RSFSR, 1956. 66 p. (MLRA 10:4)
(Mechanical drawing-Study and teaching)

TKACHENKO, N. I.

CHERNYAYEV, S. I., redaktor; ~~TKACHENKO, N. I.~~, redaktor; RODIONOVA, Z.,
redaktor; HYBIN, I. V., tekhnicheskii redaktor

[Teaching mechanical drawing in the secondary school] Iz opyta
prepodavaniia chercheniia v srednei shkole; sbornik statei. Moskva,
Gos. uchebno-pedagog. izd-vo M-va prosv. RSFSR, 1956. 106 p.
(Mechanical drawing--Study and teaching) (MLRA 10:4)

TKACHENKO, N. I.

"Improvement in the Biological Retting of Jute Based on
the Study of Its Microflora." Cand Biol Sci, Leningrad State U,
Leningrad, 1954. (RZhBiol, No 4, Feb 55)

SO: Sum. No. 631, 26 Aug 55-Survey of Scientific and Technical
Dissertations Defended at USSR Higher Educational Institu-
tions (14).

T. Kachenko, N. I.

Biological treatment of waste water from hydrolytic plants.
E. E. Drublyanets, I. K. Smirnov, N. I. Tkachenko, A. V.
Tsalkova, and Z. T. Ivanova. *Gidrotekhnika i Lesokhimiya*, Prom.
8, No. 7, 13-16 (1955).—The results from the plant runs

carried out in 2 types of waste-treatment installations are reported. "Biontlers" (I) are shallow filter beds filled with coke, cinder, or gravel. These particles are surrounded by a membrane of microorganisms. In "aerotanks" (II) the microorganisms are sorbed to the "active slurry" (III). Waste water is partially neutralized, thoroughly aerated, and transferred to a tank where it is diluted with fresh river water and furnished with nutrient salts ($(\text{NH}_4)_2\text{SO}_4$ and a superphosphate). Thus pretreated waste water (pH 6-6.5, B.O.D. 300-400 mg. O/l., 7-9 mg. N/l., and 3-6 mg. P/l.) is carried to II over trays or is pumped to the middle of II, where it is intimately mixed with III. From II it flows into a settler, from which the settled slurry is returned to II. Artificial aeration is used in II but not in I. The capacity of II is greater than that of I, but the latter are more economical.

T. Jurecic



TKACHENKO, N.I.

Yeastlike organisms of biofilters purifying sewage in hydrolysis plants. Mikrobiologiya 32 no.3:526-528 My-Je'63 (MIRA 17:3)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-spirovoy promyshlennosti, Leningrad.

TKACHENKO, N.I.

Distribution of micro-organisms in the biofilter cleaning the sewage waters of a hydrolysis factory. Mikrobiologiya 29 no.2:253-258 Mr-
Ap '60. (MJRA 14:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidroliznoy i
sul'fitno-spirovoy promyshlennosti (VNIIGS), Leningrad.
(INDUSTRIAL WASTES--MICROBIOLOGY)

TKACHENKO, N.I.; IVANOVA, Z.T.

Studying the composition of the wastes of yeast production.
Gidroliz. i lesokhim. prom. 18 no.5:13-14 '65. (MIRA 18:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidroliznoy
i sul'fitno-spirtovoy promyshlennosti.

VORONIN, P.S., inzh.; TKACHENKO, N.I., inzh.

Using twin guns for the spot welding of automobile fenders.

Avtom. svar. 17 no.11:78 N '64

(MIRA 18:1)

1. Zaporozhskiy avtomobil'nyy zavod.

RUDNYY, N.M., kand.tekhn.nauk; MASLOVSKI, V.V., inzh.; TKACHENKO, N.K.,
inzh.

Device for measuring direct current in electrolysis networks.
Vest. elektroprom. 31 no.9:68-71 S '60. (MIRA 15:5)
(Electrolysis)

ZISLINA, N.N.; NOVIKOVA, L.A.; TKACHENKO, N.M.

Electrophysiological study of inhibitory and excitatory influences of the hippocampus. Fiziol. zhur. 49 no.1:5-15
Ja '63. (MIRA 17:2)

1. Elektrofiziologicheskaya laboratoriya Instituta defekto-
logii Akademii pedagogicheskikh nauk RSFSR, kafedry vysshey
nervnoy deyatel'nosti Gosudarstvennogo universiteta imeni
Lomonosova, Moskva.

5(1)

AUTHORS: Epshteyn, D. A., ~~Zhachenko~~, N. M., SOV/20-122-5-35/56
Miniovich, M. A., Dobrovol'skaya, N. V.

TITLE: A Two-Stage Catalyst for Oxidation of Ammonia
(Dvukhstupenchatyy katalizator okisleniya ammiaka)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 5,
pp 874-877 (USSR)

ABSTRACT: Catalysts for the oxidation of ammonia to nitric oxide can be divided according to their chemical composition into platiniferous and non-platiniferous catalysts. The latter include iron, cobalt, chromium oxides and oxides of other metals. In industry platiniferous catalysts are used almost exclusively, although they are less accessible and more expensive than non-platiniferous ones and involve large irrecoverable losses. But they are stable and guarantee a high degree of transformation of ammonia to nitric oxide (97-98% yield of N_2O). Both groups of catalysts have a great power of selectivity. The question arises as to the conditions under which non-platiniferous catalysts retain their high selectivity without change for a period of time that would meet industrial requirements. The first and second author studied the oxidation

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A Two-Stage Catalyst for Oxidation of Ammonia

SOV/20-122-5-35/56

of ammonia with several non-platiniferous catalysts (Ref 1). Because of various difficulties it was decided to place a standard platinum grid in front of the non-platiniferous catalyst so that the latter contacts a partly reacted mixture. By means of a sight glass it was discovered that the non-platiniferous catalyst, which formerly would hardly glow, soon started to operate again under these conditions. The yield of nitric oxide rose to its original level (98%) and remained there for a long time without dropping: under all other optimum conditions the non-platiniferous catalyst reached stability. It was obvious that the drop of activity and selectivity of the non-platiniferous catalyst was due to a change in its frontal layer, that comes into contact with the new air-ammonia mixture. The great amount of heat created and the ever present poisonous components inactivate the frontal layer. If a platinum grid is used, comparatively little heat is created because of the reduced ammonia concentration and a part of the poison is neutralized by the platinum. The authors have conducted experiments under different conditions and with grids of different densities. The results are given in table 1. From this study the conclusion may be drawn that some non-platiniferous catalysts equal platiniferous catalysts with

Card 2/3

A Two-Stage Catalyst for Oxidation of Ammonia

SOV/20-122-5-35/56

respect to their selectivity. They possess a higher stability; when part of the ammonia was previously oxidized at a platiniferous catalyst. A possible mechanism of reaction had been discussed before (Ref 3). There are 1 table and 3 Soviet references.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut azotnoy promyshlennosti (State Scientific and Planning Research Institute of Nitrogen Industry)

PRESENTED: June 9, 1958, by S. I. Vol'fkovich, Academician

SUBMITTED: June 6, 1958

Card 3/3

TKACHENKO, N.M., inzh.

Stimulating the students' interest for industrial chemistry
("Visual aids on industrial chemistry for secondary schools;
description of aids and methods for their use" by D.A.Epshtein.
Reviewed by N.M.Tkachenko). Khim.v shkole 14 no.4:84-85
Jl-Ag '59. (MIRA 12:11)
(Chemistry, Technical--Audio-visual aids)
(Epshtein, D.A.)

EPSHTEYN, D.A.; TKACHENKO, N.M.; MNIOVICH, M.A.; DOBROVIL'SKAYA, N.V.

Two-stage catalyst for the oxidation of ammonia. Dokl.AN SSSR 122
no.5:874-877 O '58. (MIRA 11:11)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut
azotnoy promyshlennosti. Predstavleno akademikom S.I. Vol'fkovichem.
(Ammonia) (Oxidation) (Catalysts)

TKACHENKO, N.N.

Experimental plant-breeding station in Krymsk is 25 years old. Kons.i
ov.prom. 16 no.4:35-36 Ap '61. (MIRA 14:3)

1. Opytno-selektsionnaya stantsiya Vsesoyuznogo instituta rasteniye-
vodstva v Krymske.
(Krymsk—Plant breeding)

REZNIKOV, Fedor Illarionovich; TKACHENKO, N.N., red.; BYKOVA, G.N.,
tekhn.red.

[History of Kholmogory cattle] Istorii kholmogorskogo skoto-
vodstva. Arkhangel'sk, Arkhangel'skoe knizhnoe izd-vo, 1957.
271 p. (MIRA 14:2)

(Cattle breeds)

KOSTSOVA, A.G.; TKACHENKO, N.N.; YEVSEYEVA, I.I.

Alkanesulfonic acids. Part 24: Acetylation of some N-aryl amides
of alkanesulfonic acids in the presence of aluminum chloride.
Zhur.ob.khim. 31 no.7:2241-2246 J1 '61. (MIRA 14:7)

1. Voronezhskiy gosudarstvennyy universitet.
(Sulfonic acid) (Amides)

TKACHENKO, N.N.

Effect of spinal hemisection vasomotor reflexes of the hind legs
in dogs [with summary in English]. Fiziol.zhur. 44 no.4:356-364
Ap '58. (MIRA 11:4)

1. Kafedra fiziologii 2-go Meditsinskogo instituta im. N.I.Pirogova,
Moskva.

(SPINAL CORD, physiology
eff. of hemisection on vasomotor reflexes of hind limbs
in dogs (Rus))

(EXTREMITIES, blood supply
vasomotor reflexes in hind limbs of dogs, eff. of
spinal cord hemisection (Rus))

TRACHENKO, N.N.

Use of similarity criteria in the physicochemical mechanics of materials. Fiz.-khim. mekh. mat. 1 no.1:82-84 '65. (MIRA 19:1)

1. Fiziko-mekhanicheskiy institut AN UkrSSR, L'vov.
Submitted August 10, 1964.

GUTMAN, E.M.; KARPENKO, I.V.; TKACHENKO, N.N.

Effect of the scale factor on the strength of metals in anodic
dissolution, and the similarity condition. Fiz.-khim. mekh. mat.
1 no.1:85-89 '65. (MIRA 19:1)

1. Fiziko-mekhanicheskiy institut AN UkrSSR, L'vov. Submitted
September 15, 1964.

TKACHENKO, N.M.; VASILENKO, I.I.; KARPENKO, G.V.

Modeling the corrosive effect of a working medium on the strength of geometrically similar specimens. Fiz.-khim. mekh. mat. 1 no.5: 539-541 '65. (MIRA 19:1)

1. Fiziko-mekhanicheskiy institut AN UkrSSR, L'vov. Submitted April 14, 1965.

TEACHENKO, N.N.; BOLTANOVICH, A.L.; KADENKO, G.V.

Effect of the type of loading on the corrosion-fatigue strength of steel. Fiz.-khim. mezh. mat. 1 no.5:620-621 '65.

(HJRA 19:1)

1. Fiziko-mekhanicheskii Institut AN UkrSSR, L'vov. Submitted May 10, 1965.

VASILENKO, I.I.; KARPENKO, G.V.; MIKITISHIN, S.I.; TRACHENKO, N.N.

Reversible and irreversible hydrogen brittleness. Fiz.-khim. mekh.
mat. 1 no.5:624-625 '65. (MIRA 19:1)

1. Fiziko-mekhanicheskiy Institut AN UkrSSR L'vov. Submitted
June 16, 1965.

TKACHENKO, N.O.; LARIONOVA, Z.K.; MERKULOVA, Z.N.; GORDIYCHUK, M.I.
[Hordiichuk, M.I.]

Deresination of felt cones. Leh. prom. no. 2: 29-30 Ap-Je '64.
(MIRA 17:7)

TKACHENKO, N.S.

137-58-5-11110

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 315 (USSR)

AUTHORS: Tkachenko, N.S., Sakunov, V.I.

TITLE: Determination of Arsenic in Iron Manganese Ores and Sinters
(Opredeleniye mysh'yaka v zheleznykh margantsevykh rudakh
i aglomeratakh)

PERIODICAL: Tr. Nauchno-tekhn. o-va chernoy metallurgii. Ukr. resp.
pravl., 1956, Vol 4, pp 125-126. Comments, pp 131-137

ABSTRACT: A weighed portion of ore is fused with Na_2CO_3 and ZnO and is then leached in H_2SO_4 (1:4) in the presence of $\text{H}_2\text{C}_2\text{O}_4$. KBr , HCl , and hydrazine sulfate or hydrazine chloride are added, and the As is driven off by distillation. After evaporating the distillate with HNO_3 and adding a molybdate-hydrazine mixture, the solution is heated to the boiling point, is allowed to cool, and is then analyzed by colorimetric methods.

P. K.

1. Arsenic--Determination
2. Ores--Test methods
3. Colorimetry--Applications

Card 1/1

KASHCHEYEV, V.N.; TKACHENKO, N.Ya.

Friction of bronze against bronze at different speeds and loads.
Izv. vys. ucheb. zav.; fiz. no.2:171-173 '58. (MIRA 11:6)

1. Sibirskiy fiziko-tekhnicheskii institut pri Tomskom gosuniversitete
im. V.V. Kuybysheva.
(Bronze--Testing) (Friction)

TOMASHEVICH, F.V. (Novocherkassk)

Concept of the function in a school course. Mat. v shkole no.4:25-32

Jl-Ag '54.

(MIRA 7:7)

(Functions)

18

ca

Catalysts for two-step oxidation of ammonia at low temperature. D. A. Epshtein, N. M. Tkachenko and Mavrennikova. *J. Applied Chem. (U. S. S. R.)* 11, 731-3 (in French 733) (1938).—Oxidation of NH_3 introduced as NH_3 -air mixt. (10% of NH_3) at a velocity of 150-200 l. min. over Co catalyst at 550-700° yielded 95-6% of NO and over Fe-Bi catalyst contg. 20-40% of Bi_2O_3 yielded a max. of 80%. The oxidation of NH_3 over Pt-Rh catalyst at 550° yielded 87-9% of oxide. The oxidation of NH_3 at 650° over Pt-Rh catalyst (gauze) and then direction of the resulting gas over Fe-Bi catalyst yielded 94-6% of oxide.

A. A. Podgorny

ASS-SLA METALLURGICAL LITERATURE CLASSIFICATION

"...and I am not alone."

60. 1013-14. 6. 1014. (1013-14)

Государственный комитет по делам Благородного Дома и по делам
и церковным учреждениям, а также по делам Благородного Дома и по делам

TKACHENKO, N.M.

Prevent gas escape beyond casing strings. Bezop truda v prom. 7
no.4:11-14 Ap '63. (MIRA 16:4)

1. Glavnyy geolog Gosudarstvennogo komiteta pri Sovete
Ministrov UkrSSR po nadzoru za bezopasnym vedeniyem rabot
v promyshlennosti i gornomu nadzoru.
(Gas well logging--Safety measures)

TKACHENKO, N. M., Cand Agr Sci -- (diss) "Agricultural engineering of the raising of early tomatoes on the open ground of the Left-Bank forest steppes of the UkrSSR." Khar'kov, 1958. 18 pp (Min of Agr USSR. Khar'kov Order of Labor Red Banner Agr Inst im V.V. Dokuchayev), 210 copies (EL, 41-58, 122)

- 30 -

Ca

18

CONTACT APPARATUS FOR THE OXIDATION OF AMMONIA. N. M. KACHENKO. Russ. 46,000, May 31, 1936. A heat exchanger for cooling the reaction gases is placed in the same jacket after the contact frames.

ASB-56 METALLURGICAL LITERATURE CLASSIFICATION

TKACHENKO, N.N.

Breeding work with sweet corn. Kons. i ov. prem. no. 7:25-27
Jl '63. (MIRA 16:9)

1. Opytno-selektsionnaya stantsiya Vsesoyuznogo instituta
rasteniyevodstva v Krymske.

TKACHENKO, N.N.; CHIZHOV, S.T.; MESHCHEROV, E.T.; TKACHEV, R.Ya.;
DANILOV, V.P.; KURZINA, I.A., red.; PROKOF'YEVA, L.N.,
tekhn. red.

[Cucumbers] Ogurtsy. [B]N.N.Tkachenko i dr. Moskva, Sel'-
khozizdat, 1963. 205 p. (MIRA 16:5)
(Cucumbers)

TKACHENKO, N.N.

Effect of loading frequency on the fatigue strength of steel.
Fiz.-khim. mekh. mat. 1 no.2:243 '65. (MIRA 18:6)

1. Fiziko-mekhanicheskiy institut AN UkrSSR, L'vov.

TKACHEV, I. I.

Similitude criteria of the process of mercury action on brass.
Fiz.-khim. mekh. mat. 1 no.2:142-143 '65. (MIRA 18:6)

1. Fiziko-mekhanicheskiy institut AN UkrSSR, L'vov.

TKACHENKO, N.N.; VASILENKO, I.I.; KARPENKO, G.V.

Modeling the process of chemical dissolution of geometrically similar specimens. Fiz.-khim. mekh. mat. 1 no.2:144-146 '65.
(MIRA 18:6)

1. Fiziko-mekhanicheskiy institut AN UkrSSR, L'vov.

L 01123-66 EPA(s)-2/EWT(m)/EWP(w)/EPF(c)/EMA(d)/T/EWP(t)/EWP(z)/EWP(b)
IJP(c) JD/JW/JG/WB

ACCESSION NR: AP5019662

UR/0369/65/001/003/0355/0360

AUTHOR: Tkachenko, N. N.; Vasilenko, I. I.; Karpenko, G. V.

TITLE: Fracture of copper alloys during tests in mercury salt solutions

SOURCE: Fiziko-khimicheskaya mekhanika materialov, v. 1, no. 3, 1965, 355-360

TOPIC TAGS: copper alloy, brass fracture, bronze fracture, mercury nitrate solution, embrittlement, brittle fracture, anodic polarization, cathodic polarization

ABSTRACT: The fracture of brass under the action of mercury is usually attributed to its embrittlement owing to the penetration of atoms of mercury. The attendant decrease in strength and plasticity is due to a more or less pronounced decrease in the specific free energy of the new surfaces that develop in the process of plastic deformation, as a result of the adsorption of mercury ions thereon as well as of the formation of amalgams. During tests of brass in solution of mercury nitrate, the diffusion penetration of mercury into brass may be accompanied by the dissolution of anodic sectors, which usually contributes to crack formation. Considering, however, that cathodic polarization from an external current source was absent

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L 01123-66

ACCESSION NR: AP5019662

44, 16 2

prior to fracture (although in many cases of corrosion cracking cathodic protection prolongs the time until fracture), it had been concluded (R. B. Mears, R. H. Brown, E. H. Dix, Symposium on Stress Corrosion Cracking of Metals, ASTM-AIME, 1944, 67-110) that the fracture of brass in solutions of mercury salts (in the absence of polarization) is due to the penetration of mercury into the metal. In this connection, to clarify the role of anodic processes, the authors investigated the effect of anodic and cathodic polarization, in the presence of different current densities, on the length of the period until the fracture of brass in mercury nitrate solutions. Cylindrical specimens of brass and aluminum bronze (7% Al, 2% Fe, 91% Cu) with uniformly pure surfaces were, after machining and 2 hr annealing in a vacuum ($1 \cdot 10^{-4}$ mm Hg) at 300°C, subjected to fracture tests and tensile tests in special machines while being immersed in a bath of 0.15% mercury nitrate solution. The time until fracture was determined from the instant the solution was poured into the tank. Control experiments without polarization from an external current source also were performed (the platinum electrode was removed from the bath). It was found that both anodic and cathodic polarization accelerated the embrittlement and fracture of the specimen, anodic polarization being particularly effective. In the case of brass this effect of mercury was more marked than in the

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ACCESSION NR: AP5019662

case of bronze. This is primarily attributed to the presence of zinc²¹ in bronze. Under conditions of the experiment, anodic polarization only partly prevented the deposition of mercury ions on the brass surface. At the same time it led to an intense dissolution of anodic sectors of the metal and thereby to the facilitation of crack formation in the surface layers, which were already embrittled by the penetrated mercury. A major role in accelerating the formation and development of cracks in the presence of anodic polarization is played by the selective nature of penetration of mercury into the metal -- through the adsorptional migration over grain boundaries and over the outcropping surface dislocations and other structural defects. As a result of such a mercury penetration, the metal becomes strongly embrittled and, in addition, the heterogeneity of its structure is enhanced, thus apparently leading to an intensification of electrochemical processes. Thus, anodic polarization leads to a sharp decrease in strength and plasticity but only in the cases where the surface layers are embrittled by the mercury diffusing into them. Orig. art. has: 6 figures. 4

ASSOCIATION: Fiziko-mekhanicheskiy institut AN UkrSSR, L'vov (Physico-Mechanical Institute, AN UkrSSR)

44,55

Card 3/4

L 01123-66

ACCESSION NR: AP5019662

SUBMITTED: 26Feb65

ENCL: 00

SUB CODE: MM, GC

NO REF SOV: 006

OTHER: 002

Card 4/4

DP

MAKSIMOVICH, G.G.; YANCHISHIN, F.F.; TKACHENKO, N.N.; NAGIRNYI, S.V.;
BARANETSKYI, V.S.

Effect of round hole type stress concentrators on the mechanical
characteristics of brass. Viliian. rab. sred na svois. mat. no.2:
56-60 '63. (MIRA 17:10)

L 64763-65

ACCESSION NR: AP5019664

and aluminum was unchanged regardless of the current density even at a deformation rate as low as 0.007 mm/min. Thus, it can be concluded that standard size specimens of copper, zinc, and aluminum are not susceptible to hydrogen embrittlement. Orig. art. has: 1 figure. [MS]

ASSOCIATION: Fiziko-mekhanicheskiy institut AN UzbSSR, Physiomechanical Institute, AN UzbSSR,

SUBMITTED: 26Feb65

ENCL: 00

SUB CODE: M4,AS

NO REF SOV: 003

OTHER: 000

ATD PRESS: 4078

Card

S/239/62/048/010/004/004
I015/I215

AUTHOR: Tkachenko, I.M.

TITLE: A technique for the insertion of multiple electrodes
into various cortical regions of a cat's brain

PERIODICAL: Fiziologicheskii zhurnal SSSR im. I.M. Sechenova
v. 48, no. 10, 1962, 1279-1282

TEXT: In order to carry out chronic experiments it is
necessary to develop a safe and relatively simple technique of
inserting multiple electrodes into various cortical regions. The
technique described fits these requirements since it enables the
simultaneous insertion of 48 electrodes for chronic experiments
(5 months and more) without apparent disturbances of the animal's

Card 1/2

S/239/62/048/010/004/004
I015/I215

A technique for the

well-being. It was found at autopsy (the animal was sacrificed after 5 months) that the contact plate which was made of plastic was actually implanted into the cranial bone and a scar tissue was formed around it. Modifications of the technique are being elaborated at present, in order to make it suitable for investigations of deeper layers of the cortex and of the subcortex. There are 4 figures. ✓

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Card 2/2

USSR/Zooparasitology. Ticks and Insects in Disease Vectors.
Mites.

G

Abs Jour: Ref Zhur-Biol., No 17, 1958, 77035.

Author : Gladkikh, S.G.; Shilova, S.A.; Tkachenko, N.N.;
Korovina, A.G.

Inst :

Title : Results of Work of Conducting Anti-Tick Prophylaxis
in the Localized Region of Spring-Summer Encephalitis.

Orig Pub: Tr. Tsentr. n.-i. dezinfects. in-ta, 1957, vyp. 10,
226-233.

Abstract: No abstract.

Card : 1/1

TKACHENKO, N. N., Cand of Agric Sci -- (diss) "Obtention of cucumber hybrid seeds."
Moscow, 1957, 14 pp (Moscow Agricultural Academy im K. A. Timityazev), 110 copies
(KL, 29-57, 92)

TKACHENKO, N.N.; GOVOROV, N.V.

Make wider use of hybrid cucumber seeds in commercial plantations.
Kons.1 ov.prom. 14 no.2:32-34 F '59. (MIRA 12:3)

1. Opytno-selektsionnaya stantsiya v Krymske.
(Cucumbers)